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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,097	12/14/2004	Norbert Boll	2002P09525WOUS	5413
7590 09/27/2007 Siemens Corporation Intellectual Property Department 170 Wood Avenue South Iselin, NJ 08830			EXAMINER RUTKOWSKI, JEFFREY M	
			ART UNIT 2616	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/518,097

Applicant(s)

BOLL ET AL.

Examiner

Jeffrey M. Rutkowski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 27-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 27-49 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/14/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

**Claims 1-26** have been cancelled.

#### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claims 36-49** are rejected as failing to define the invention in the manner required by 35 U.S.C. 112, second paragraph.

The claim(s) are narrative in form and replete with indefinite and functional or operational language. The structure which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a manner as to present a complete operative device. The claim(s) must be in one sentence form only. Note the format of the claims in the patent(s) cited.

#### *Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

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international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claims 27-28, 30-31, 33-34, 36-38 and 40-48** are rejected under 35 U.S.C. 102(e) as being anticipated by Heink et al. (US Pg Pub 2003/0174729), hereinafter referred to as Heink.
6. For **claim 27**, Heink teaches an Asynchronous Transfer Mode (ATM) port with integrated Ethernet switch interface [title]. The encapsulation of ATM cells into Ethernet frames [0066] includes aggregating the payload of an ATM cell [0071]. Then checking to ensure the ATM payload does not exceed the maximum size for Ethernet payload. If the maximum size is not reached, another ATM cell is added to the Ethernet frame [0072] (inserting the information that is to be transmitted as payload into a payload-field of a data packet of the packet-oriented communication network). A destination Media Access Control (MAC) address is added to the Ethernet frame before the ATM cell is placed into the frame [0068] (inserting target information into the data packet). The Destination MAC (DMAC) address is delivered via port address either directly or coded as a binary number that is converted via configurable table [0068]. After the DMAC is set, the Source MAC address is assigned [0069] (assigning routing information to the information which is to be transmitted prior to the insertion into the payload-field of the data packet for an onward transmission). The Ethernet frames are forwarded according to their DMAC addresses [0063] (forwarding the information transmitted to the target in accordance with the assigned routing information; transmitting the data packet, the information inserted into the data packet, and the assigned routing information to a target represented by the target information of the data packet in the packet-oriented communication network).
7. For **claims 28 and 45**, Heink teaches everything in parent **claims 27 and 42, respectively**. The ATM packets have a pre-pended port address that specifies the output port of

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the Ethernet switch [0065]. Virtual Local Area Networks (VLAN) can be used to separate the Ethernet switch ports [0109] (claim 28: wherein the information inserted into the payload-field of the data packet is assigned to at least one virtual connection made at least partially via the packet-oriented communication network; claim 45: wherein at least one connection unit or central unit located in the communication device and including the respective switching mechanisms is represented by the target information of the at least one data packet).

8. For **claims 30, 37 and 43**, Heink teaches everything in parent **claims 27, 36 and 42, respectively**. The rejection of **claim 27** discloses an ATM packet being encapsulated into an Ethernet frame (the information to be transmitted is a component of at least one data cell of a cell-oriented communication network). The rejection of **claim 28** discloses a port address is prepended to the ATM cells before encapsulation (prior to the insertion into the payload-field of the at least one data packet a further information field where the routing information can be inserted is added to the at least one data cell). Figure 6 of Heink discloses an ATM controller that interacts bi-directionally with an Ethernet encapsulating unit and an ATM physical layer (wherein the at least one data cell transmitted to the at least one target in the packet-oriented communication network is forwarded to/via the cell-oriented communication network according to the assigned routing information).

9. For **claims 31, 38 and 44**, Heink teaches everything in parent **claims 27, 36 and 42, respectively**. When a destination device has determined it is the destination device for an Ethernet packet, the entire Ethernet packet header and payload are removed and only the ATM payload is forwarded to an ATM controller [0078] (wherein before the at least one data cell is

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forwarded to/via the cell-oriented communication network the further information field is removed).

10. For **claims 33-34, 40-41 and 47-48**, Heink teaches everything in parent **claims 27, 36 and 42, respectively**. The teachings from the rejection of **claim 27** disclose the use of ATM cells encapsulated in Ethernet frames (claim 33: wherein the cell-oriented communication network is designed according to the asynchronous transfer mode; claim 34: wherein the packet-oriented communication network is designed according to the standard IEEE 802.3).

11. For **claim 36**, the teachings of Heink from the rejection of **claim 27** discloses a mechanism for the encapsulation of ATM packets into Ethernet frames (a mechanism assigned to the insertion mechanisms for assigning additional routing information to the information that is to be inserted into the payload-field of the at least one data packet, wherein the packet-oriented communication network is designed in such a way that the at least one data packet and the information inserted into it together with the routing information assigned in each case are transmitted to at least one target represented by the target information of the data packet in the packet-oriented communication network, and wherein at each such target switching mechanisms are provided, by which the information transmitted to the target is forwarded in accordance with the routing information assigned in each case).

12. For **claim 42**, the teachings of Heink from the rejection of **claim 27** discloses a mechanism for the encapsulation of ATM packets into Ethernet frames (assignment mechanisms which are assigned to the insertion mechanisms are provided for the purpose of assigning in each case additional routing information to the information that is to be inserted into the payload-field of the at least one data packet, wherein the communication network is designed in such a way

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that the at least one data packet and the information inserted into it together with the routing information assigned in each case are transmitted within the communication device to at least one target represented by the target information of the at least one data packet, and that in the communication device switching mechanisms assigned to each such target are provided, by which the information transmitted to the target is forwarded in accordance with the routing information assigned in each case).

13. For **claim 46**, Heink teaches everything in parent **claim 42**. The teachings of Heink from the rejection of **claims 30, 37 and 43** disclose the use of a port address being used for routing information (wherein the additional routing information represents at least one subscriber connection line connected to the respective connection unit, or at least one connection port assigned to the respective connection unit).

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

16. **Claim 29** is rejected under 35 U.S.C. 103(a) as being unpatentable over Heink in view of Sasson et al. (US Pat 6,728,261), hereinafter referred to as Sasson.

17. For **claim 29**, Heink teaches everything in parent **claim 27**. Heink does not teach wide area network routing. Sasson teaches the wide area networking limitation absent from the teachings of Heink by disclosing an ATM over IP **[title]** method and system capable of being used in a wide area network **[abstract and figure 1]** (wherein the information transmitted to the target in the packet-oriented communication network is replicated according to the routing information and the replicated information is then forwarded).

18. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use wide area networking in Heink's invention since IP-based networks expand beyond local networks.

19. **Claims 32, 35 and 39** are rejected under 35 U.S.C. 103(a) as being unpatentable over Heink in view of Roberts ("Request for Coordination of Frames in Cells Specification").

20. For **claims 32 and 39** Heink teaches everything in parent **claims 27 and 37, respectively**. Heink does not teach the insertion of information pertaining to the number of cells. Roberts teaches the insertion of information pertaining to the number of cells limitation absent from the teachings of Heink by disclosing a cell payload field indicates the number of cell payloads following a Cells in Frames (CIF) header **[page 18, 1<sup>st</sup> paragraph]** (wherein an item of information representing the number of data cells inserted into the payload-field of the data packet is inserted into the data packet).



21. It would have been obvious to a person of ordinary skill in the art at the time of the invention to include the a number representing the number of data cells in Heink's invention so a device knows which header belongs to which payload.

22. For **claim 35**, Heink teaches everything in parent **claim 27**. Heink does not teach routing information includes information for identifying an ATM service class. Roberts teaches the service class identification limitation absent from the teachings of Heink by disclosing Transmission Control Protocol (TCP) flow control activity is determined by whether or not ATM Available Bit Rate flow control is active [**page 5, CIF Design section**] (wherein the routing information includes further information for identifying an ATM service class).

23. It would have been obvious to a person of ordinary skill in the art at the time of the invention to include ATM service class information in routing information in Heink's invention to make sure the IP deliver method is used for an ATM service class.

24. **Claim 49** is rejected under 35 U.S.C. 103(a) as being unpatentable over Heink in view of Roberts and Bechtolsheim et al. (US Pat 6,515, 963), hereinafter referred to as Bechtolsheim.

25. For **claim 49**, Heink teaches everything in parent **claim 47**. Heink does not teach using routing information to identify a service class or assigning a queue to each service class. The rejection of **claim 35** discloses the use of routing information to identify a service class. The rejection of **claim 35** also provides the motivation to combine. Bechtolsheim teaches the service class queue limitation absent from the teachings of Heink by disclosing a queuing embodiment where a separate queue is provided for each service class [**col. 13 lines 60-65**] (wherein the routing information includes information for identifying an ATM service class, wherein a

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corresponding queue located on the appropriate connection unit is assigned to each ATM service class concerned).

26. It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide a queue for each service class in Heink's invention to allow for per-flow buffer management.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey M. Rutkowski whose telephone number is (571) 270-1215. The examiner can normally be reached on Monday - Friday 7:30-5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Jeffrey M Rutkowski

Patent Examiner

09/20/2007

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